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| Subject: Rounding (Estimations) | | **Teacher:** | | **Grade Level:**Fourth | **Date(s):** September 12-16, 2016 | |
| **Curriculum Area:** Math | | | | **I Can Statements &Learning Targets** *(I can……..):*  I can round numbers, up to one million, to any given place value. | | |
| **Content :** *Common Core Standards & Essential Standards*  **4.NBT.3 -** Use place value understanding to round multi-digitwhole numbers to any place**.**  **SPIRAL** - **4.NBT.1, 4.NBT.2** | | | | **Technology Standards &Resources:**  [**http://www.ncpublicschools.org/docs/acre/standards/new-standards/info-technology/gradek.pdf**](http://www.ncpublicschools.org/docs/acre/standards/new-standards/info-technology/gradek.pdf) **- Grade 4 - pgs. 9-10**  [Fourth Grade Tasks](http://3-5cctask.ncdpi.wikispaces.net/Fourth+Grade+Tasks)  [Mr. Anker Tests 4th Grade Activities](http://www.henryanker.com/4th_Activities.html) (Assessments)  <http://www.doe.k12.de.us/assessment/files/Math_Grade_4.pdf> - (Scrollfor specific standard)  [Rounding PowerPoints](http://math.pppst.com/rounding.html)  Internet4Classrooms [Common Core Math Tasks](http://www.internet4classrooms.com/common_core/3rd_5th_math_tasks.htm)  ixl[Fourth Grade Math Skills](http://www.ixl.com/math/grade-4) - categorized | | |
| Essential Question(s): *(What question(s) should students be able to answer at the end of the lesson/unit?)*   * What is a sensible answer to a real problem? * What information is needed in order to round a whole number to any place? * How can I ensure my answer is reasonable? * How can rounding help me compute numbers? | | | | **Higher Order Thinking/Revised Blooms:***(Questions that will enable students to find connections or extend learning.)*  Can understanding place and value lead to number sense and efficient strategies for computing with numbers?  What effect does the location of a digit have on the value of the digit? | | |
| **Vocabulary:** *Academic/Content*  Multi-digit, Place value, Value, Rounding, Whole number  [Interactive Math Dictionary](http://www.amathsdictionaryforkids.com/) - Demonstrate with students | | | | **Teacher Resources:**  *Utilize Everyday Math Kits for some manipulatives – ie. Number decks, dice, base-10 blocks etc.*  [Math Unpacking Document](http://www.ncpublicschools.org/docs/acre/standards/common-core-tools/unpacking/math/4th.pdf)  [Standards for Mathematical Practice](http://www.corestandards.org/Math/Practice/)  [Blackline Masters](http://wps.ablongman.com/ab_vandewalle_math_6/0,12312,3547876-,00.html)  [Everyday Math Common Core Crosswalk](https://emccss.everydaymathonline.com/em-crosswalk/grades.php?grade=4) | | |
| **Monday**  **Subject Integration:** | **Whole Group**  Teach/review rounding - [LearnZillion rounding resources](https://learnzillion.com/lessons/525-round-numbers-to-a-specified-place-on-a-number-line) (reference)  Journal Prompt:Think of two numbers that when rounded to the nearest hundred, their sum is 500. Write five different pairs of numbers. | | | **Small Group**  Work with peers to discuss, explain procedures of rounding.  Problem solving – Ex: What will four shirts that sell for $7.99 each cost? What will five pounds of potatoes cost that sell for eighty-nine cents a pound? | | **Independent Work**  Rounding whole numbers where there may be significant digits to the left of the rounding place.  Versions 1, 2, 3, and 4 (difficulty levels)  [Complex rounding numbers](http://www.dadsworksheets.com/v1/Worksheets/Rounding%20Numbers.html#More Complex Rounding Numbers) |
| **Tuesday**  **Subject Integration:** | **Whole Group**  [Rapid Rounding](http://www.education.com/pdf/six_tricks_practice_math_third/)  Students “vote with their feet” to understand math concept. (Adjust as needed) | | | **Small Group**  [Roll’ em and Round’ em Practice Game](https://docs.google.com/a/bryantschools.org/document/d/17XvgXZ4wvIzjd4IaJjO-YOQCpPs23_xXSr1WlLwkCsU/edit?hl=en_US&pli=1)  Needed: two 1-6 number cubes, one 4-9 number cube, Recording sheet (make or use lined paper) | | **Independent Work**  [Seashell Rounding Activity Page](http://www.janbrett.com/piggybacks/rounding.htm); After students complete, create their own seashell problems. |
| **Wednesday**  **Subject Integration:** | **Whole Group**  [Who Wants to Be a Millionaire – Rounding Master](http://mrnussbaum.com/mathmillions/)  Review rules of rounding. Have students create their own manipulative for rounding. Use as reference. | | | **Small Group**  Partners work to solve problems[rounding whole numbers](http://www.littleworksheets.com/worksheets/math/grade4/4NBTA3RoundingWholeNumbers.pdf). Be able to defend choices. | | **Independent Work**  [Rounding](http://www.k5learning.com/free-math-worksheets/fourth-grade-4/place-value-rounding) worksheets for practice |
| **Thursday**  **Subject Integration:** | **Whole Group**  **Cereal Pieces** - Guess the number of pieces of cereal that fit in a small cup and use the pieces in estimating the volume of the cup. After that, trace the bottom of the cup on a piece of paper. Make a vertical and horizontal line through the center of the circle. Then measure the height of the cup, make a line on the paper to represent height. Line the pieces of cereal side by side along each line, one line at a time, and count how many pieces fit. Each answer is written down and then the three answers are multiplied. Product is the **estimate** of how many pieces of cereal will fit in the cup or the volume of the cup in cereal pieces. | | | **Small Group**  [Partner Game – Round to the Nearest Hundred](https://docs.google.com/a/bryantschools.org/file/d/0B2ZmEgbHrS3GMWVmY2NmMWYtNzY3OS00M2Y4LWI3MzgtYmFmYmU5NzE4MzRj/edit?hl=en_US&pli=1)  Needed: Print game board; stack of playing cards | | **Independent Work**  Problem solving - Ex: A school picnic committee has a budget of $25 for paper and plastic products. One package of paper plates costs $6.79. A package of napkins costs $3.29. A package of cups costs $3.25. A box of plastic forks costs $2.59. If the committee needs two packages each of plates and cups, one package of napkins, and one box of forks, will they stay within their budget? Estimate to find your answer. |
| **Friday**  **Subject Integration:** | **Whole Group**  Think and Discuss –Thirty-five is halfway between 30 and 40. How does knowing the halfway point between tens help you round?  [Guesstimation Game](http://www.education.com/pdf/The_Guess-timation_Game/) (prep before)  This game gives kids a chance to work on their estimation skills, as well as simple addition and  subtraction. | | | **Small Group**  Read **Coyotes All Around (or other book)**  Take the face cards from a deck of cards and place the deck face down between two or more players. Each player draws two cards and uses them to make a double-digit number. Players round numbers with highest number winning.  http://www.mathstart.net/userimages/books/coyotes_all_around.gif | | **Independent Work**  Rounding games to practice and reinforce rounding skills in a fun way – [Math Nook](http://www.mathnook.com/math/skill/roundinggames.php)  Journal Idea – A number rounded to the nearest ten is 70. What numbers might you have rounded? |
| **Reflection-Checking for Understanding**  Students in need of **remediation:**  **Action/Activities:**  Provide students with a number line with a range of numbers noted to assist with rounding - OR –mountains/rollercoasters. | | | **Reflection-Checking for Understanding**  Students on **target:**  **Action/Activities:**  Discuss whether these answers are definitely wrong or not: 2,365 + 7,694 = 10,059; 1,788 – 891= 497. Justify. | | | **Reflection-Checking for Understanding**  Students who need **enrichment:**  **Action/Activities:**  Have students create a rounding game that includes instructions. |

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| **Common Standards for Mathematical Practices** - Make sense of problems and persevere in solving them; Reason abstractly and quantitatively; Construct viable arguments and critique the reasoning of others; Model with mathematics; Use appropriate tools strategically; Attend to precision; Look for and make use of structure; Look for and express regularity in repeated reasoning |